

Rocky Shore



How do I survey my Marine Metre Squared?

- Plan your trip to the shore at low tide.** Tide times can be found by looking in the weather information section of a newspaper, or on the Metservice website at <http://www.metservice.com/marine/tides/index>.
- Make your Metre Square (quadrat).** Make a square frame by tying 4 x 1-metre lengths of bamboo canes together, or a 4-metre length of rope or twine with three knots tied on it at 1-metre intervals that can be arranged into a square shape on the shore.
- At the seashore.** Randomly choose a position to lay your square down near the sea. **Never turn your back on breaking waves at the water's edge!** Record the shore level on the data sheet. To help you find your metre squared again look for and photograph the site and note any particular rocks or features that could help you on your next visit.
- Count animals and plants in your square**
 - Measure the abundance of **seaweeds using percentage cover**. This is the percentage of the surface inside the square that is covered by the seaweed when looking down.
 - Start in one corner of your square and **count the animals** that you can see without moving any rocks or seaweed. Some small animals like barnacles can be found in very large numbers and it may not be possible to count all of these animals accurately inside your square. You can do a rough count in a small part of your square and scale this up.
 - Look for hidden animals on and under seaweeds, inside rocky crevices and beneath small boulders. If you turn rocks over remember to return them gently to their original position. **Do not lift rocks that are larger than your head.**

If you find a species you cannot identify, write a description of it in the species list. If you can, take a photo of it with a ruler in the shot to indicate its size. Write a brief description of where it was found and what is was doing: this information can help others to identify it later.
- Record your survey site information.**
 - Record the location of the site, or even just the name of the beach or a local landmark. This can also be done using a GPS function on your phone.
 - Write a brief description of the site including possible influences on the plants and animals living there, and other optional information about the site, weather and sea conditions.
 - Record the surfaces in your square (eg reef, boulder, etc) in percentages.
- Take a photo.** Take a picture of your square from directly above so that you can compare changes to the plants and animals living there over time.
- Enter your information on the Marine Metre Squared website:** www.mm2.net.nz

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Mm2 SURVEY INFORMATION

Date: _____ **School/group:** _____

Location name: _____ **No of surveyors:** _____

Start time: _____ **Surveyor names:** _____

Shore level: Low Mid High _____

Substrate in the m ² area:	Percentage cover	%
Reef <i>(stable rock cover)</i>		
Boulder <i>(head size)</i>		
Cobble <i>(fist size)</i>		
Gravel <i>(marble size)</i>		
Sand <i>(like the beach)</i>		
Sediment <i>(fine grain size)</i>		
Mud <i>(gloopy)</i>		

Location description:

Briefly describe the site and highlight any features or activities that might influence the animals and plants found there (e.g. rocky headland with surf beach 3 km to south; freshwater creek 50 m to the north; upper shore modified with harbour wall; popular site for paua collectors, etc.).

PHOTO: Take a photo of your m² area to upload onto the website.

Optional information:

Low tide time: _____ **GPS/grid ref:** _____

Low tide depth: _____ m **Air temperature:** _____ °C

Weather: _____ **Sea temperature:** _____ °C

Sea conditions: _____ **Water clarity:** _____ cm

Exposure: _____ **Salinity:** _____ g/L

